Focus Area D – Laboratory Capacity (Chemical Agents)
April 2004 Progress Report

[CC-10::RA-1]	Hire and train a chemical terrorism laboratory coordinator (chemist or medical technologist) and assistant coordinator						
Status Complete:	Completed	**Fund Committed:**	$.00	**Anticipated Completing with in the Budget Year?**	Yes	**Anticipate Redirecting Funds?**	No
Percent Complete:	100%	**Funds Expended:**	$.00				

Grantee Activity:	Grantee Activity Progress:	Barriers:
A. Hire a Chemical Terrorism (CT) Laboratory Coordinator and Assistant Laboratory Coordinator B. Train the CT Laboratory Coordinator and Assistant Coordinator to advise the laboratory director, the State Terrorism Coordinator and other public health and environmental health officials about chemical terrorism incidents and preparedness. C. Establish competency in collection and transport of clinical specimens to laboratories capable of measuring chemical threat agents.	A. The California program hired and supported a CT Laboratory Coordinator and an Assistant Laboratory Coordinator in the current year with Supplemental funds from Focus Areas A and C, respectively. The Laboratory Coordinator was established as a civil service position and hired with funds from Focus Area A - Preparedness Planning and Readiness Assessment. The Laboratory Coordinator hired is a Ph.D. biochemist and California Clinical Laboratory Scientist with experience in clinical laboratory supervision and research, toxicology consultation, and environmental health research. The Assistant Laboratory Coordinator was established as a civil service position and hired with funds from Focus Area C – Laboratory Capacity for Biologic Agents. The Assistant Coordinator hired is Ph.D. analytical chemist whose experience includes industrial research, international business development, and college level science teaching. Focus Area D now proposes to fund the Coordinator and Assistant Coordinator from the Focus Area D budget, because their activities support Focus Area D Critical Capacities and Benchmarks. B. Both positions are trained and regularly advise State, other public health, and environmental health officials about chemical terrorism incidents and preparedness. C. In partnership with Local Public Health, we have developed a program where FA-D trains county public health in the collection and transport of clinical specimens. County public health then trains the hospitals, clinics and EMS in their jurisdiction. We currently have presented this training to staff from nearly all California counties. We will have covered all counties by the end of this grant period.	None

[CC-10::RA-2]	Develop a component that directs how public health, food testing, environmental testing, and other laboratories within your jurisdiction will respond to a chemical terrorism incident						
Status Complete:	In Progress	**Fund Committed:**	$.00	**Anticipated Completing with in the Budget Year?**	Yes	**Anticipate Redirecting Funds?**	No
Percent Complete:	51%-75%	**Funds Expended:**	$.00				

Grantee Activity:	Grantee Activity Progress:	Barriers:
A. Identify the public health, food testing, environmental testing, and other state and federal laboratories within California (in coordination with LA County) that may be involved in a response to a chemical terrorism incident B. Identify contacts and establish relationships with these laboratories. Document their capabilities, capacities, and self-identified rolls and responsibilities. C. In conjunction with Focus Area E, draft a comprehensive mechanism for reporting laboratory data to public health officials, law enforcement agencies, and other chemical terrorism LRN laboratories.	A. We have identified the wide group of laboratories that may be involved in a response to a chemical terrorism incident through a. The Inter-Laboratory Working Group, organized by the Division of Laboratory Science to bring together Federal, State, County and private laboratories to discuss their roles in terrorism response, b. Exercises (tabletops) presented by State and Federal agencies, and, c. Our Regional Workshops, which we developed to educate all components of chemical terrorism response to our various capabilities and responsibilities. We have contributed, in discussion and authorship, to the Comprehensive Response Plan developed by the Division of Environmental & Occupational Disease Control. This plan presents the Division's	None

	public health response, including providing toxicology fact information on the agents involved, providing health impact forecasts and surveys, tracking the long-term impact on workers, as well as the affected population, and laboratory response (collection and shipping of biological samples). B. We have developed contacts with public health, food testing, environmental testing, and other state and federal laboratories within California. Examples are: Paul Duffey, Microbial Disease Branch (510-412-3729), for the laboratory response to biological agents, Tom Sidebottom, USFDA (510-637-3960) and Leta Crawford-Miksza, Division of Food, Drug and Radiation Safety (510-412-6233), on food safety issues, Kusum Perera, Division of Drinking Water & Environmental Management (510-620-2915), on drinking water issues, Victor Anderson, Radiation Health Branch (916-440-7931), on radiation contamination, Kathleen Fallis, 95th CST (510-780-0683), concerning on-scene support and environmental sample collection, and Paul Spackman, Lawrence Livermore National Laboratory (925-422-7716), on WMD agent issues. C. In this grant period, in conjunction with FA-E, we have identified partners for a pilot data sharing and warehousing project. We are meeting with these partners to identify common goals and establish common protocols.	

[CC-10::RA-3]	Establish and document in the comprehensive response plan, relationships with local members of HazMat teams, first responders, local, state, and federal law enforcement, and the Army National Guard						
Status Complete:	In Progress	**Fund Committed:**	$.00	**Anticipated Completing with in the Budget Year?**	Yes	**Anticipate Redirecting Funds?**	No
Percent Complete:	51%-75%	**Funds Expended:**	$.00				

Grantee Activity:	**Grantee Activity Progress:**	**Barriers:**
Our overarching approach will be to record the relationships as they develop and assess which are missing in the course of preparing a mid-year progress report. At that time, we will develop a plan to complete the missing links and document the relationships in the comprehensive response plan by the end of the funding period.	Our response plan treats how we will work with partners within the Department of Health Services and outside of the Department. Key organizations (and lead contacts) include: Division of Communicable Disease Control (Debra Gilliss, 510-540-3386, and Paul Duffey, 510-412-3729) on the response to biological agents, with USFDA (Tom Sidebottom, 510-637-3960) and the Division of Food, Drug and Radiation Safety (Leta Crawford-Miksza, 510-412-6233) on food issues, with the Division of Drinking Water & Environmental Management (Kusum Perera, 510-620-2915) on drinking water issues, with the Radiation Health Branch (Victor Anderson, 916-440-7931) on radiation contamination, with the 95th CST (Kathleen Fallis, 510-780-0683) concerning on-scene response and environmental sample collection issues, and with Lawrence Livermore National Laboratory (Paul Spackman, 925-422-7716) on WMD agent issues.	None

[CC-10::RA-4]	Join the chemical terrorism component of the Laboratory Response Network (LRN)						
Status Complete:	In Progress	**Fund Committed:**	$.00	**Anticipated Completing with in the Budget Year?**	Yes	**Anticipate Redirecting Funds?**	No
Percent Complete:	51%-75%	**Funds Expended:**	$.00				

Grantee Activity:	**Grantee Activity Progress:**	**Barriers:**
California is an existing Level Three Laboratory in the CDC CTLRN and will support our Level One and Two functions. We will also provide reach-back capacity for proposed Level One and Two Laboratories in Nevada and LA County under Memos of Understanding to be developed.	A memo of understanding with Nevada is under development. The LA County Lab decided that they did not want to have a memo of understanding with the FA-D laboratory program. California's FA-D program is current with the Level Three and Two activities released by CDC. Key laboratory staff are registered with the LRN.	Adding Focus Area D staff to the LRN was complicated because no Focus Area D staff held administrator rights. Adding staff required approval of an administrator in Focus Area C, who was not well acquainted with needs of Focus Area D.

[CC-10::RA-5]	Enhance relationships with other chemical terrorism-related resources							
Status Complete:	In Progress	**Fund Committed:**	$.00	**Anticipated Completing with in the Budget Year?**	Yes	**Anticipate Redirecting Funds?**	No
Percent Complete:	51%-75%	**Funds Expended:**	$.00				

Grantee Activity:	Grantee Activity Progress:	Barriers:
Within CDHS, integration of the chemical terrorism-related resources is described in various division-level response plans. Focus Area D personnel will be responsible for writing a section in the response plan that identifies federal, state, local and private sector chemistry laboratories that are likely to be involved in chemical terrorism laboratory response. Through outreach efforts and meetings, staff will document self-identified roles and responsibilities of lab partners and establish the ways in which these laboratory partners would interact in a chemical terrorism event.	We developed enhanced relationships with local public health laboratories, local hazmat, fire and law enforcement organizations and other state and federal terrorism response agencies through a series of regional training activities that were built around the protocols for human sample collection and transportation. We presented our training module, "Collection, Packaging and Shipping of Biological Specimens in a Chemical Event" on the following dates:04/03/2003 Training session at Richmond (45 attendees) 04/04/2003 Training session at LA (30 attendees) 04/05/2003 Training session at LA (30 attendees) 05/01/2003 Chemical Terrorism Preparation Symposium at Newport Beach (240 attendees) 05/12/2003 Training session at San Diego (15 attendees) 05/13/2003 Training session at El Centro, Imperial County (15 attendees) 06/20/2003 Training session at Redding (30 attendees) 08/07/2003 Training session at Oroville, Butte County (30 attendees) 09/30/2003 Training Session at Modesto, Stanislaus County (30 attendees) 12/09/2003 Training Session at Richmond Laboratory for Alameda County (30 attendees). In addition to training local staff in sample collection, we organized and participated in a regional symposium: "Training for a Chemical or Radiological Incident", September 3, 2003, at the Radisson Hotel & Conference center in Fresno. Public and environmental health staff of six neighboring counties (Fresno, Madera, King, Kern, Tulare and Riverside) attended. Eighty-five persons attended from local Hazmat, fire and law enforcement, emergency operations centers, environmental health, public health, emergency room nurses, CD/Epi Nurses and Public health and hospital laboratories. The format is designed to give all responding sectors a uniform approach, based on the California Standardized Emergency Management System (SEMS) in preparing for and responding to a chemical event. Feedback from attendees was overwhelmingly positive. Three more similar sessions were held in 2004: on April 15 in Santa Clara; on April 16 at San Luis Obispo; and on April 28 at Riverside County.	None

[EC-7 ::EA-1]	Develop or enhance plans and protocols							
Status Complete:	In Progress	**Fund Committed:**	$.00	**Anticipated Completing with in the Budget Year?**	Yes	**Anticipate Redirecting Funds?**	No
Percent Complete:	Less than 25%	**Funds Expended:**	$.00				

Grantee Activity:	Grantee Activity Progress:	Barriers:
California is an existing Level Three Laboratory, and we have set out a program for Level One activities in the preceding sections. Together these capacities address activities (a) clinical specimen transport and handling, (b) worker safety, (c) appropriate Bio-Safety Level (BSL) conditions for working with clinical specimens, (d) staffing and training of personnel, (e) quality control and assurance, (f) internal and external proficiency testing, (h) secure storage of critical agents and samples of forensic value, and (i) appropriate levels of supplies and equipment needed to respond to chemical terrorism events. In this section we will address activity (g) triage procedures for prioritizing intake and testing of specimens or samples before analysis.	The Office of Laboratory Resource Preparedness and Response (LRPR) has been established and tasked with developing triage procedures for prioritizing intake and testing of specimens or samples prior to laboratory analysis. The Assistant Deputy Director for Laboratory Science (ADDLS) has asked each branch laboratory chief to nominate two laboratory-based technical volunteers to serve on a Richmond Laboratory Campus (RLC) Hazmat team. When the team is constituted they will: 1. Develop protocols for sample receipt and triage 2. Be trained to handle hazardous materials spills at the RLC and hazardous samples coming to the RLC that have not been field screened by the FBI or another local Hazmat team. In addition, the ADDLS has asked for a list of technical people from each laboratory that can	Significant barriers are: A. Lack of funds: No agency is clearly responsible for establishing an all-hazards triage lab. Therefore, while we have scraped together miscellaneous equipment with various funding sources, no one has stepped forward with the considerable funds necessary for an isolated, stand-alone triage lab. This lab must be isolated to prevent contamination, injury or death in the main facility in the event of an extreme mishap during the initial screening of an unknown specimen. B. Lack of consensus protocol: Despite the intense interest in a rational procedure for initially screening an unknown specimen, no authoritative group has issued a protocol.

	participate in technical consultations regarding unknown specimens handling and assessment. This All Hazard Triage Laboratory technical advisory group would be assembled on an ad-hoc basis in an "emergency" and may meet periodically for tabletop exercises. This technical advisory group will be coordinated by the LRPR.	

[EC-7 ::EA-2]	Level-Two laboratories must, in collaboration with CDC, purchase equipment, hire and train staff, implement analytical methods, participate in proficiency testing programs, and demonstrate competency in the analysis of Level-Two chemical agents or their metabolites in human specimens						
Status Complete:	In Progress	**Fund Committed:**	$.00	**Anticipated Completing with in the Budget Year?**	Yes	**Anticipate Redirecting Funds?**	No
Percent Complete:	Less than 25%	**Funds Expended:**	$.00				

Grantee Activity:	**Grantee Activity Progress:**	**Barriers:**
As a Level 3 laboratory, in collaboration with CDC, California has purchased equipment, hired and trained staff, implemented analytical methods, successfully participated in proficiency test programs and demonstrated competency in the analysis of chemical agents. We have registered at CTQ Quebec, Canada, and purchased PE samples for metals. We will continue to work with CDC to achieve future goals and objectives. The Inductively Coupled Plasma/Mass Spectrometer (ICP/MS) and Gas Chromatograph/Mass Selective Detector (GC/MSD) instruments are deployed and in use. Staff has being trained at the CDC in the ICP/MS technique for metal analysis. Other staff is scheduled for training for cyanide analysis in July 2003.	The Inductively Coupled Plasma/Mass Spectrometer (ICP/MS) and Gas Chromatograph/Mass Selective Detector (GC/MSD) instruments are deployed and in use. Staff has completed training and method validation in the metals screen and cyanide detection. We have successfully completed proficiency testing in both	None

[EC-7 ::EA-3]	Participate in at least one exercise per year that specifically tests chemical terrorism laboratory readiness and capability to detect and identify at least one chemical-threat agent						
Status Complete:	In Progress	**Fund Committed:**	$.00	**Anticipated Completing with in the Budget Year?**	Yes	**Anticipate Redirecting Funds?**	No
Percent Complete:	Less than 25%	**Funds Expended:**	$.00				

Grantee Activity:	**Grantee Activity Progress:**	**Barriers:**
CDHS will participate in exercises conducted by Focus Area A, under the auspices of the Office of Emergency Services, State of California. Participate in at least one exercise by January 2004 or as scheduled.	We participated in a Statewide exercise on March 9-10. A second, Division-wide, exercise is scheduled for May 19, 2004.	None identified.

[EC-7 ::EA-4]	Use BSL-2 practices, as outlined in the CDC-NIH publication "Bio-safety in Microbiological and Biomedical Laboratories, 4th Edition" (BMBL), to process clinical specimens						
Status Complete:	In Progress	**Fund Committed:**	$.00	**Anticipated Completing with in the Budget Year?**	Yes	**Anticipate Redirecting Funds?**	No
Percent Complete:	Less than 25%	**Funds Expended:**	$.00				

Grantee Activity:	**Grantee Activity Progress:**	**Barriers:**
All laboratory personnel will receive biohazard training (aka, Universal Precautions) at the time they are hired, and yearly thereafter. Selected staff will be trained in hazmat protocols as part of sample receipt and screening protocols in the "All Hazards Triage" Lab being established by the DHS Office of Laboratory Resources and Emergency Response at the Richmond Laboratory Campus.	All staff received biohazard, chemical, and radiological safety training. The Quality Assurance Officer (QAO) of the Environmental Health Laboratory Branch ensures that this training is current, as required by CLIA. Training for the triage lab will be under the auspices of the Office of Laboratory Resources and Emergency Response.	1. Staff time is limited 2. Funds are not available for construction of the triage lab

[EC-7 ::EA-5]	At a minimum, ensure that laboratory security is consistent with standards set forth in the Select Agent Rule						
Status Complete:	In Progress	**Fund Committed:**	$.00	**Anticipated Completing with in the Budget Year?**	Yes	**Anticipate Redirecting Funds?**	No
Percent Complete:	Less than 25%	**Funds Expended:**	$.00				

Grantee Activity:	Grantee Activity Progress:	Barriers:
The Select Agent rule and USA PATRIOT Act provisions apply to certain biotoxins such as ricin. Should CDC transfer ricin analysis technology to the lab, we will comply fully with the PATRIOT Act of 2001. Building security to meet these requirements is part of the design of the Richmond Laboratory Facility, which we will occupy during the budget year. Specific rooms for handling chemical terrorism agents were constructed to meet the FBI four-hour tool and torch designation.	We met the requirement of this section at the beginning of the grant period. There has been so change, so we are still current.	None.

[EC-7 ::EA-6]	Enhance and document Internet connectivity to enable rapid communication via the Internet for information and data transfer with chemical laboratories in the LRN						
Status Complete:	In Progress	**Fund Committed:**	$.00	**Anticipated Completing with in the Budget Year?**	Yes	**Anticipate Redirecting Funds?**	No
Percent Complete:	Less than 25%	**Funds Expended:**	$.00				

Grantee Activity:	Grantee Activity Progress:	Barriers:
CDHS has proposed a project in Focus Area E to address laboratory connectivity. The following sections detail our proposal: 1. Standardize Chemical Analytical Data and Reporting -- Work with laboratory partners to standardize reporting, according to industry standards (including ISO and CLIA) and CDC guidelines. 2. Integrate Different Software Environments -- Integrate different platforms, operating systems, and data structures to enable sample tracking both within the State Public Health laboratory and through partnerships with other public, private, or federal laboratories. Integrate system planning, design, data mapping, development, testing, and deployment. 3. Plan for Electronic Reporting, Following Automatic Machine/Information System Interface -- Advance integration of analytical instrument output into laboratory information management systems (LIMS) and to electronic data reporting. Reduce data input errors, speed sample processing, reduce data reporting errors, and enhance confidentiality and security of analytical results. 4. Develop a strategy for Remote Data Access, Organization and Management	This is a multi-year project. In this grant period, we have identified five partners for a pilot data-sharing network. They are two state level participants (Nevada and Los Angeles) and three county health laboratories (Fresno, Orange and Monterey). We have identified the IT contact in each program and secured an assurance of interest from them and the laboratory director. We have surveyed the laboratories' existing analytical capabilities and current data handling systems. The next step is to meet to explore common interests and set goals. However, we haven't taken that step because it is dependent on a statement from State-level IT concerning the data transmission system we can use, and that statement is still missing.	To conserve resources, to prevent introducing yet another data handling protocol, and because we are a very small working group, we prefer to append our data collection onto one of two state-of-the-art systems being developed by other, larger, units (CELDAR and RASSCLE). While the managers of both projects have welcomed our possible inclusion, neither project is progressing at the speed we expected. As a consequence, we will begin experimenting with a smaller stand-alone program. This will give us experience in cooperative data sharing, even though it is not sufficiently powerful to support a wider laboratory network.

[EC-8 ::EA-1]	Level-Three laboratories must, in collaboration with CDC, purchase equipment, hire and train staff, implement analytical methods, participate in proficiency testing programs, and demonstrate competency in the analysis of Level-Three chemical agents						
Status Complete:	In Progress	**Fund Committed:**	$.00	**Anticipated Completing with in the Budget Year?**	Yes	**Anticipate Redirecting Funds?**	No
Percent Complete:	Less than 25%	**Funds Expended:**	$.00				

Grantee Activity:	Grantee Activity Progress:	Barriers:
As a Level 3 laboratory, in collaboration with CDC, California has purchased equipment, hired and trained staff, implemented analytical methods, successfully participated in proficiency test programs and demonstrated competency in the analysis of chemical agents. We will continue to work with CDC to achieve future goals and objectives.	We are current in all Level-Three activities. Attempts to backfill the laboratory vacancy at the Research Scientist I level failed to attract a viable candidate. Permission was received to hire at the Research Scientist II level. The job has been announced and candidate interviews are anticipated to begin by the end of April.	1. Very difficult to back-fill for vacant State positions. 2. Very difficult to develop personal services contract for two contract chemists.

[EC-8 ::EA-2]	Participate in at least one exercise per year that specifically tests chemical terrorism laboratory readiness and capability to detect and identify at least two chemical-threat agents						
Status Complete:	In Progress	**Fund Committed:**	$.00	**Anticipated Completing with in the Budget Year?**	Yes	**Anticipate Redirecting Funds?**	No
Percent Complete:	Less than 25%	**Funds Expended:**	$.00				

Grantee Activity:	Grantee Activity Progress:	Barriers:
CDHS will participate in exercises conducted by Focus Area A, under the auspices of the Office of Emergency Services, State of California. 1. Participate in an exercise involving a Level Two agent 2. Participate in at least one other exercise involving a Level Three agent	The Division exercise is scheduled for May 19. It will test readiness and response to two chemical agents.	None identified.

[EC-8 ::EA-3]	In collaboration with CDC and other Level-Three laboratories, participate in method development and validation studies						
Status Complete:	In Progress	**Fund Committed:**	$.00	**Anticipated Completing with in the Budget Year?**	Yes	**Anticipate Redirecting Funds?**	No
Percent Complete:	Less than 25%	**Funds Expended:**	$.00				

Grantee Activity:	Grantee Activity Progress:	Barriers:
The California Level Three laboratory will participate in the development of improved methods for critical analytes, chosen in collaboration with CDC.	We participate in the development of improvements to the CDC methods. California will host the annual Level-Three meeting this April and will deliver two papers on method development at this meeting.	Limited staff prevents more robust method development efforts.

[EC-8 ::EA-4]	Provide surge capacity to CDC and serve as a referral laboratory for Level-One and Level-Two laboratories						
Status Complete:	In Progress	**Fund Committed:**	$.00	**Anticipated Completing with in the Budget Year?**	Yes	**Anticipate Redirecting Funds?**	No
Percent Complete:	Less than 25%	**Funds Expended:**	$.00				

Grantee Activity:	Grantee Activity Progress:	Barriers:
Maintain Level Three surge capacity on a 24/7 basis. 1. Maintain all equipment in a state of readiness 2. Ensure currently trained analysts 3. Maintain adequate level of reagents and supplies 4. Maintain communication with CDC, and establish communication with Level One or Two partners in Los Angeles and Nevada.	We maintain all equipment in a state of readiness. We ensure our staff is currently trained. We maintain adequate level of reagents and supplies. We maintain communication with CDC, and have established communication with Level One or Two partners in Los Angeles and Nevada.	Limited staff prevents full surge capacity response.

[EC-8 ::EA-5]	Develop and implement a plan for 24/7 staff coverage in the event of a chemical terrorism emergency						
Status Complete:	Not Addressed	**Fund Committed:**	$.00	**Anticipated Completing with in the Budget Year?**	Yes	**Anticipate Redirecting Funds?**	No
Percent Complete:	-	**Funds Expended:**	$.00				

Grantee Activity:	Grantee Activity Progress:	Barriers:
A 24/7 system of communication was previously established between Focus Area D staff, using e-mail, telephone, and pagers. Staff takes turns (for two week at a time) being the emergency contact. The newly hired CT Coordinator and Assistant CT Coordinator were added to the 24/7-response team. In an event or a drill, the emergency contact activates the response plan that begins with calling the laboratory director, who calls in support as needed.	On top of the existing Focus Area D call-back system, the Department has established a duty officer assigned to public health emergency response on a 24/7 basis. The Governor's Office of Emergency Services Warning Center will contact the Department Duty Officer whenever a public health emergency call is received. She/he, in turn, will contact FA-D if the event is chemical related. California conducts regular exercises with local health jurisdictions to test the readiness of the 24/7 system.	As with all other areas of readiness, the state has struggled due to hiring freezes that have impacted the ability to hire staff.